

In the ClaimsClaims 1-41 (Cancelled)Claim 42 (New):

An isolated pluri-differentiated mesenchymal progenitor cell, wherein said cell simultaneously expresses a plurality of genes that are markers for multiple cell lineages, and wherein each of said markers is specific for a single cell lineage.

Claim 43 (New):

The isolated cell of claim 42, wherein said multiple cell lineages comprise at least four different mesenchymal cell lineages.

Claim 44 (New):

B7 The isolated cell of claim 42, wherein said single cell lineage is selected from the group consisting of adipocyte, osteoblast, fibroblast, and muscle cell.

Claim 45 (New):

The isolated cell of claim 42, wherein said markers specific for a single cell lineage are selected from the group consisting of Nile Red, Oil Red O, adipsin, alkaline phosphatase, cadherin-11, chondroitin sulfate, collagen type I, decorin, fibronectin, prolyl-4-hydroxylase, actin, caldesmon, and transgelin.

Claim 46 (New):

The isolated cell of claim 42, wherein said cell simultaneously expresses said plurality of genes in the presence of hydrocortisone and horse serum.

Claim 47 (New):

The isolated cell of claim 42, wherein said cell is not a neoplastic cell.

Claim 48 (New):

An isolated pluri-differentiated mesenchymal progenitor cell, wherein said cell simultaneously expresses a plurality of genes in the presence of hydrocortisone and horse serum that are markers for multiple cell lineages, wherein each of said markers is specific for a single cell lineage, and wherein said single cell lineage is selected from the group consisting of adipocyte, osteoblast, fibroblast, and muscle cell.

Claim 49 (New):

The isolated cell of claim 48, wherein said markers specific for a single cell lineage are selected from the group consisting of Nile Red, Oil Red O, adipsin, alkaline phosphatase, cadherin-11, chondroitin sulfate, collagen type I, decorin, fibronectin, prolyl-4-hydroxylase, actin, caldesmon, and transgelin.

Claim 50 (New):

A composition comprising pluri-differentiated mesenchymal progenitor cells and a pharmaceutically acceptable carrier, wherein each of said cells simultaneously expresses a plurality of genes that are markers for multiple cell lineages, and wherein each of said markers is specific for a single cell lineage.

Claim 51 (New):

The composition of claim 50, wherein said multiple cell lineages comprise at least four different mesenchymal cell lineages.

Claim 52 (New):

The composition of claim 50, wherein said multiple cell lineages are selected from the group consisting of adipocyte, osteoblast, fibroblast, and muscle cell.

Claim 53 (New):

The composition of claim 50, wherein said markers specific for a single cell lineage are selected from the group consisting of Nile Red, Oil Red O, adipsin, alkaline phosphatase, cadherin-11, chondroitin sulfate, collagen type I, decorin, fibronectin, prolyl-4-hydroxylase, actin, caldesmon, and transgelin.

Claim 54 (New):

The composition of claim 50, wherein said cells simultaneously express said plurality of genes in the presence of hydrocortisone and horse serum.

Claim 55 (New):

The composition of claim 50, wherein said cells are not neoplastic cells.

Claim 56 (New):

The composition of claim 50, wherein said pluri-differentiated mesenchymal progenitor cells are isolated cells.

Claim 57 (New):

The composition of claim 50, wherein said pluri-differentiated mesenchymal progenitor cells are present in an amount effective for treating a disease state in a mammal in need thereof.

Claim 58 (New):

The composition of claim 50, wherein said pluri-differentiated mesenchymal progenitor cells are present in an amount effective to enhance hematopoietic stem cell engraftment or hematopoietic progenitor cell engraftment in a mammal in need thereof.

Claim 59 (New):

The composition of claim 50, wherein said pluri-differentiated mesenchymal progenitor cells are present in an amount effective to treat graft-versus-host disease (GvHD) in a mammal about to undergo bone marrow or organ transplantation or suffering from GvHD caused by bone marrow or organ transplantation.

Claim 60 (New):

✓ A composition comprising pluri-differentiated mesenchymal progenitor cells and a pharmaceutically acceptable carrier, wherein each of said cells simultaneously expresses a plurality of genes in the presence of hydrocortisone and horse serum that are markers for multiple cell lineages, wherein each of said markers is specific for a single cell lineage, and wherein said single cell lineage is selected from the group consisting of adipocyte, osteoblast, fibroblast, and muscle cell.

Claim 61 (New):

The composition of claim 60, wherein said markers specific for a single cell lineage are selected from the group consisting of Nile Red, Oil Red O, adipsin, alkaline phosphatase, cadherin-11, chondroitin sulfate, collagen type I, decorin, fibronectin, prolyl-4-hydroxylase, actin, caldesmon, and transgelin.

Claim 62 (New):

A plurality of isolated pluri-differentiated mesenchymal progenitor cells, wherein at least 95% of said plurality of cells is a cell that simultaneously expresses a plurality of genes that are markers for multiple cell lineages, wherein each of said markers is specific for a single cell lineage, and wherein said single cell lineage is selected from the group consisting of adipocyte, osteoblast, fibroblast, and muscle cell.